

**QP CODE: 212327**

**Reg. No:.....**

**Second Semester M. Pharm Degree Supplementary Examinations  
February 2025**

**M.Pharm (Pharmaceutics)**

**Paper II: Advanced Bio-Pharmaceutics and Pharmacokinetics (MPH 202T)  
(Common for 2017 and 2019 Scheme)**

**Time: 3 Hours**

**Total Marks: 75**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Essays**

**(3x10=30)**

1. Discuss in detail the biopharmaceutical considerations in designing the drug product. Add a note on in vitro drug product performance using suitable methods.
2. Explain in detail about the various dissolution methods.
3. Elaborate the protocol and procedure for conducting bioequivalence studies.

**Short Notes**

**(9x5=45)**

4. Demonstrate any two methods involved in determination of bioavailability.
5. Explain in detail about the development and applications of monoclonal antibodies.
6. Summarize the various rate limiting steps in drug absorption.
7. Explain the equation involved in calculating the loading dose in an IV infusion using the steady state drug concentration.
8. Discuss on Biopharmaceutics classification system.
9. Outline the cytochrome p450 based drug interactions with examples.
10. Enlist the Pharmacokinetic models and mention their significance.
11. Discuss on pH partition hypothesis and its limitations.
12. Interpret the applications of pharmacokinetics on modified Release drug products.

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